

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of controlling a plurality of processing elements, comprising:
~~at least certain of said processing elements~~ maintaining a count in each of a plurality of processing elements, each count being responsive to a processing element's location; ~~and~~
receiving data in each of said plurality of processing elements from processing elements connected thereto;
~~selecting from among the received data one of the received data, in each processing element maintaining a count,~~ for output in response to that processing element's count; and
saving said selected data.
2. (original) The method of claim 1 wherein said maintaining a count includes setting a counter to a first known value and altering the count at programmable intervals by a programmable amount, said storing occurring when a current count equals a target value.
3. (original) The method of claim 1 wherein said maintaining a count includes setting a counter to an initial value, and counting down from said initial value, said storing occurring when a current count is non-positive.
4. (original) The method of claim 1 wherein said maintaining a count includes setting a counter to a first known value, and counting up from said first known value, said storing occurring when a current count equals a target count.
5. (currently amended) Method of controlling the data selected as output data by a plurality of processing elements, comprising:
issuing an instruction set to said plurality of processing elements, said instruction set being performed through a series of data shifts; each processing element:
receiving data from processing elements connected thereto as a result of said data shifts;
maintaining a count responsive to said data shifts ~~within at least certain of said processing elements; and~~

selecting from among the received data one of said received data based on said count
counts; and
saving said selected data.

6. (original) The method of claim 5 wherein said instruction set includes one of an edge shift, planer shift, wrap shift and vector shift or a combination thereof.

7. (original) The method of claim 5 wherein said data shifts include shifting data in one of a north, south, east and west, plus z and minus z directions.

8. (currently amended) A method of controlling the position of data in a plurality of processing elements, comprising:

shifting data within the plurality of processing elements along one of a row, column or diagonal; ~~and~~

each active processing element receiving data from processing elements connected thereto as a result of said data shifting;

each active processing element selecting from among the received data one of the received data as a final output in response to that processing element's location within the plurality of processing elements; and

saving said selected data.

9. (previously presented) The method of claim 8 additionally comprising one of loading an initial count into at least certain of said plurality of processing elements and calculating an initial count locally based on the processing element's location in the plurality and the function being performed on the data.

10. (original) The method of claim 9 additionally comprising maintaining a current count in at least certain of said plurality of processing elements, said current count being responsive to said initial count and the number of data shifts performed, said selecting being responsive to said current count.

11. (original) The method of claim 10 wherein said initial count is modified by a programmable amount at programmable intervals to produce said current count.

12. (original) The method of claim 11 wherein said modification includes one of incrementing and decrementing said initial count.

13. (previously presented) The method of claim 12 wherein said selecting occurs when said current count is being decremented and becomes non-positive.
14. (original) The method of claim 12 wherein said selecting occurs when said current count equals a target value.
15. (original) The method of claim 8 wherein said shifting includes shifting data north to south, south to north, east to west, west to east, northeast to southwest, southwest to northeast, northwest to southeast and southeast to northwest.
16. (previously presented) A method for controlling the position of data in a matrix of processing elements, comprising:
- shifting data within the matrix of processing elements;
 - each active processing element receiving data from processing elements connected thereto as a result of said data shifting;
 - maintaining a current count in each active processing element responsive to the number of data shifts; and
 - selecting output data for each active processing element from among the data that processing element has received as a function of that element's current count; and
 - saving said selected data.
17. (original) The method of claim 16 wherein said current count is incremented in response to said data shifts and said selecting occurs when a target value is reached.
18. (original) The method of claim 16 wherein said current count is decremented from an initial count and said selecting occurs when said current count reaches a non-positive value.
19. (original) The method of claim 16 wherein said shifting includes the north to south and south to north shifting of columns, the east to west and west to east shifting of rows, and the northeast to southwest, southwest to northeast, northwest to southeast and southeast to northwest shifting of diagonals.
20. (currently amended) A method, comprising:
- shifting data within a plurality of processing elements; and
 - receiving data within each processing element from processing elements connected thereto as a result of said data shifting;

each active processing element selecting from among the data that processing element has received, data as a final output in accordance with the formula $f(x_Index, y_Index, z_Index)$ where f is dependent upon the desired output; and
saving said selected data.

21. (original) The method of claim 20 additionally comprising one of loading an initial count into each processing element and calculating an initial count locally based on the processing element's location and the function f .

22. (original) The method of claim 21 additionally comprising maintaining a current count in each processing element, said current count being responsive to said initial count and the number of data shifts performed, said selecting being responsive to said current count.

23. (currently amended) A method, comprising:

shifting data within a plurality of processing elements; and
receiving data within each processing element from processing elements connected thereto as a result of said data shifting;

each active processing element selecting from among the data that processing element has received, data as a final output in accordance with the formula $f(d(0), d(1), d(2) \dots d(n-1))$ where f is dependent upon the desired output; and
saving said selected data.

24. (original) The method of claim 23 additionally comprising one of loading an initial count into each processing element and calculating an initial count locally based on the processing element's location and the function f .

25. (original) The method of claim 24 additionally comprising maintaining a current count in each processing element, said current count being responsive to said initial count and the number of data shifts performed, said selecting being responsive to said current count.

26. (currently amended) A computer readable storage medium carrying a set of instructions which, when executed, perform a method comprising:

~~maintaining a count in at least certain of a plurality of processing elements~~ a processing element, ~~each said count~~ said count being responsive to a said processing element's location; and;
receiving data from processing elements connected to said processing element;

Appl. Nò. 10/689,380
Amdt. dated 5 July 2007
Reply to Office action of 5 April 2007

selecting data, ~~in each processing element maintaining a count,~~ from among the received
data for output in response to ~~that~~ said processing element's count; and
saving said selected data.